



Fortinet AP832

High-performance wireless connectivity for high-density environments

Dual-radio, Three-stream 802.11ac Wireless Access Point

The AP832 is the industry's first 802.11ac access point capable of supporting two concurrent 5 GHz 3x3:3ss radios. It is designed for high-density deployments in large offices, schools, universities, hospitals, hotels, and large retail stores. The AP832 supports an aggregate 2.6 Gbps data rate for the most demanding business applications like video and voice.

The AP832 access point allows administrators to prioritize applications to improve the user experience with Fortinet's unique Context Aware Layers technology. For schools, this means Learning Management System applications can be assigned to one dedicated channel layer, while online classroom video feeds can be dedicated to another channel layer. For healthcare, life-critical applications such as patient monitoring can be dynamically assigned to one channel layer, doctor and nursing applications can be assigned to a second layer, and patient applications can be placed on a third channel layer.

The AP832 also provides unique roaming support because Fortinet enables the network (not the client) to control AP client hand-off via our Air Traffic Control® technology, resulting in the industry's lowest roaming latency figures – a true zero-handoff.

Additionally, Fortinet's single-channel technology allows the AP832 to leverage the 802.11ac design for pervasive, real-world deployments of 80 MHz channels, effectively doubling the available data rate and dramatically increasing throughput availability for Fortinet customers.

Like other Fortinet access points, the AP832 integrates seamlessly with our Mobile Center, Mobile Connect, Spectrum Manager, and other application solutions to bring intelligent management and resilient wireless services to your network.

AP832

802.11ac Wireless Access Point



Features

- Supports IEEE 802.11ac- with dual radios and three spatial streams
- Support for multiple operating modes: centralized, distributed, mesh, bridged, and VPN tunnel modes
- Integration with Fortinet controllers and management software applications
- Supports either internal or external antennas

Benefits

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- Support for multiple operating modes: centralized, distributed, mesh, bridged, and VPN tunnel modes
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- Supports either internal or external antennas



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SPECIFICATIONS

QoS
WMM support
Dynamic WMM rate adaptation
Configurable QoS rules per user and application
Operating Modes
Centralized deployment mode
Distributed deployment mode
Remote VPN tunnel mode
Security
WEP, WPA-PSK, WPA-TKIP, WPA2-AES, 802.11i, 802.1X (EAP-TLS, EAP-TTLS, PEAP, LEAP, EAP-FAST, EAP-SIM, EAP-AKA, and EAP-MD5)
802.1X and captive portal authentication against local database on the controller, RADIUS, and Active Directory
RADIUS-assisted per-user and per-ESSID access control via MAC filtering
Management
Centrally managed by any Fortinet controller running System Director
Automatically discovers controllers and downloads configuration settings for plug-and-play deployment
Upgrades and management using System Director/Network Manager
Support for SNMP
Wireless Specifications
Model Introduction
AP832i dual-radio, dual-band IEEE Std 802.11a/b/g/n/ac- access point with six internal omnidirectional antennas
AP832e dual-radio, dual-band IEEE Std 802.11a/b/g/n/ac- access point with six RP-SMA connectors and six external omnidirectional antennas
Supported Radio Technologies
Dual-band, dual-radio access point
3x3:3SS (three spatial streams)
Indoor application
Supported 2.4 GHz (TurboQAM Mode) and 5.x GHz for dual-band, dual-radio operation, data rate up to 1.9 Gbps
Supported dual 5.x GHz IEEE Std 802.11ac operation with RF collocation (FCC Permit by Ask provision), data rate up to 2.6 Gbps
Supported transmit beam-forming (TxBF)
IEEE Std 802.11ac standard
IEEE Std 802.11n/ac with Orthogonal Frequency Division Multiplexing (OFDM)
IEEE Std 802.11b with Direct Sequence Spread Spectrum (DSSS)
IEEE Std 802.11ac with 20/40/80 MHz (VHT20/40/80) channel width
IEEE Std 802.11n with 40 MHz (HT40) channel width
IEEE Std 802.11a/g with 20 MHz channel
IEEE Std 802.11b with 5 MHz channel
Supported Modulation
IEEE Std 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
IEEE Std 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM
IEEE Std 802.11b: BPSK, QPSK, CCK
Featured 256-TurboQAM modulation for 2.4 GHz and 5 GHz operations
Supported MCS Index
Supported MCS0~MCS9 for IEEE Std 802.11ac
Supported MCS0~MCS23 for IEEE Std 802.11n
Supported Frequency Bands
2.400 ~ 2.4835 GHz (ISM)
5.150 ~ 5.250 GHz (UNII-1)
5.250 ~ 5.350 GHz (UNII-2, upon DFS approval)
5.470 ~ 5.725 GHz (UNII-2 Extended, upon DFS approval)
5.725 ~ 5.825 GHz (UNII-3)
Country-specific restrictions apply; adjusted by controller upon approval

Operating Channels
4 GHz Channels
- CH1~11 for U.S., Canada
- CH1~13 for Japan, Europe, rest of world
5 GHz HT20 (20 MHz) Channel
- Non-DFS Channel: CH36, 40, 44, 48, 144, 149, 153, 161, 165
- DFS Channel upon approval: CH 52, 56, 60, 64, 100, 104, 108, 112, 116, 120*, 124*, 128*, 132*, 136, 140, 144 (*weather radar)
5 GHz HT40 (40 MHz) Center Channel
- Non-DFS channel: CH38, 46, 151, 159
- DFS channel upon approval: CH54, 62, 102, 110, 118*, 116*, 134* 134, 142 (*weather radar)
5 GHz VHT80 (80 MHz) Center Channel
- Non-DFS channel: CH42, 155
- DFS channel upon approval: CH58, 106, 122* (*weather channel)
Platform supports Dynamic Frequency Selection (DFS & DFS/TPC) for future 5 GHz channel adoption
Country-specific restrictions apply; adjusted by controller upon approval
Supported Data Rate (Mbps)
IEEE Std 802.11ac three streams: 19.5 ~ 1300 Mbps (MCS0-HT20@800nS~MCS9-HT40@400nS)
IEEE Std 802.11ac per stream: 6.5 ~ 433.3 Mbps (MCS0-HT20@800nS~MCS9-HT40@400nS)
IEEE Std 802.11n Three streams: 13 ~ 450 Mbps (MCS9-HT20@800nS to MCS23-HT40@400nS)
IEEE Std 802.11n Per stream: 6.5 ~ 150 Mbps (MCS0-HT20 @ 800nS to MCS7-HT40@400nS)
IEEE Std 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
IEEE Std 802.11b: 1, 2, 5.5, 11 Mbps

Transmit Power (TX) and Receiver Sensitivity (RX) per Stream

Configuration	Minimum Transmit EIRP (dBm)	Maximum Transmit EIRP (dBm)	RX Sensitivity (dBm)
802.11b	10.0	24.0	-85
802.11g	10.0	23.0	-70
802.11n, 2.4 GHz HT20	10.0	22.0	-65
802.11n, 2.4 GHz HT40	10.0	21.0	-64
802.11a	13.0	22.0	-69
802.11n, 5 GHz, HT20	13.0	21.0	-67
802.11n, 5 GHz, HT40	13.0	20.0	-64
802.11ac, 5 GHz, HT20	13.0	21.0	-69
802.11ac, 5 GHz, HT40	13.0	20.0	-67
802.11ac, 5 GHz, VHT80	13.0	20.0	-64

Configurable Transmission Power

Transmission power configurable in 1.0 dBm increments

Unused radios can be disabled via software for lower power consumption

Physical Specifications
SKU
AP832i: Six integrated dual-band omnidirectional PIFA antennas
AP832e: Six extended reverse polarity SMA connectors; shipment comes with six omnidirectional rubber ducky antennas

SPECIFICATIONS

Specification of Default Antenna

	Model Number	Description
1	ANT-6ABGN-24	2.4/5.x GHz 2.5/4 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male jacks
2	ANT-I3ABGN-0304	2.4/5.x GHz 3/4 dBi omnidirectional ceiling mount antenna, with 36-inch external coaxial cables and 3x RP-SMA male jacks

Specification of Optional External Antennas (Sold Separately)

	Model Number	Description
1	ANT-6ABGN-24	2.4/5.x GHz 2.5/4 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male jacks
2	ANT-I3ABGN-0304	2.4/5.x GHz 3/4 dBi omnidirectional ceiling mount antenna, with 36-inch external coaxial cables and 3x RP-SMA male jacks
3	ANT-ABGN-23	2.4/5.x GHz 3/4 dBi directional patch wall/pole-mount antenna, with 60-inch external coaxial cables and 6x RP-SMA male jacks
4	ANT-ABNG230-W	2.4/5.x GHz 2/3 dBi omnidirectional rubber ducky antenna with 1x RP-SMA male jacks
5	ANT-ABGN-470	2.4/5.x GHz 4.7/4.7 dBi omnidirectional rubber ducky antenna with 1x RP-SMA male jack
6	ANT-I2ABGN-0304-O	2.4/5.x GHz 3/4 dBi omnidirectional ceiling mount antenna, with 36-inch external coaxial cables and 2x RP-SMA male jacks
7	ANT-04ABGN-0607-PT	2.4/5.x GHz 6/7 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 4x RP-SMA male jacks
8	ANT-06ABGN-0607-PT	2.4/5.x GHz 6/7 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male jacks
9	ANT-06ABGN-0606-O	2.4/5.x GHz 6/6 dBi omnidirectional wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male jacks

Power

Operated at IEEE 802.3af power

Powered by IEEE Std 802.1af or at PoE (Power over Ethernet) injector or switch
12V external power adapter (sold separately)

Other Interfaces

Networks: One 10/100/1000 BASE-T Ethernet RJ45 uplink (G1), one 10/100/1000 BASE-T Ethernet RJ45 (G2) for downlink and future expansion purposes, auto-sensing link speed and MDI/MDX

Six RPSMA RF connectors for external antenna SKU (AP832e)

One RJ45 port (G1) support IEEE Std 802.3af or at PoE

One USB 2.0 port (Type-A) for future feature

One console port

One reset button

One Kensington security slot

LED Indicators

One tri-color LED over façade for AP status

Additional LEDs for Ethernet activity over two RJ45 ports (G1 & G2)

Mounting

Wall, desktop, or ceiling mount

Three mounting kits included with access point:

- 650-00232, 15/16" T-bar & wall-mount combo adapter

- 650-00233, 9/16" T-bar adapter

- Flat-surface wall-mount bracket (used with 650-00232)

Option (ordered separately)

- CBL-SERIAL-DB9-35, DB9-stereo console cable

- CBL-RJ45-ADAPT-X5, GbE extension adapter

- MNT-FEET-SET-X5, rubber feet for desktop staging

Installation in the Air-Handling Space

AP832e metal enclosure only by removing plastic façade

Dimensions

AP832i or AP832e (with mounting bracket): 7.1" x 7.1" x 2.7" (18.0 cm x 18.0 cm x 6.8 cm)

AP832e without plastic façade: 6.3" x 6.3" x 2.1" (16.1 cm x 16.0 cm x 5.2 cm)

Weight

AP832i (with mounting bracket): 2.3 lb (1.1 kg)

AP832e (with mounting bracket): 1.9 lb (0.9 kg)

AP832e without façade and mounting bracket: 1.5 lb (0.7 kg)

Environmental

Operating temperature: 32° F to 122° F (0° C to 50° C)

Operating humidity: 5–95% (non-condensing)

Storage temperature: -40° F to 185° F (-40° C to 70° C) ambient

Storage humidity: 5–95% (non-condensing)

Regulatory Approval

FCC (United States of America)

CE Mark (European Community)

Industry Canada (Canada)

TELEC (Japan)

Safety Approval (worldwide)

EU RoHS

For more country-specific regulatory approval, please contact your Fortinet representative

Certifications

Wi-Fi certified IEEE Std 802.11a/b/g/n (ac)*



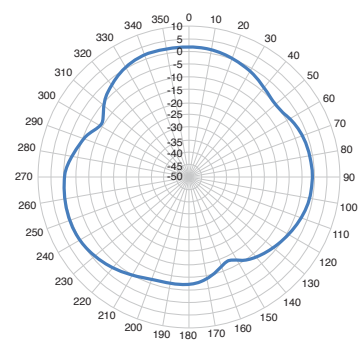
*Wi-Fi alliance certification started in June 2013 and Fortinet AP832 has been submitted for certification

Warranty

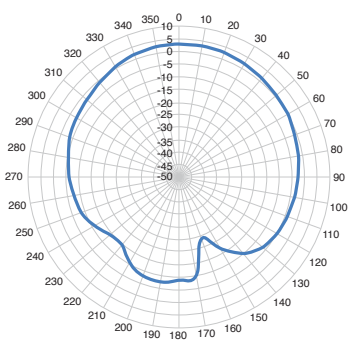
Limited lifetime warranty

ANTENNA RADIATION PATTERNS (INTERNAL ANTENNA MODEL)

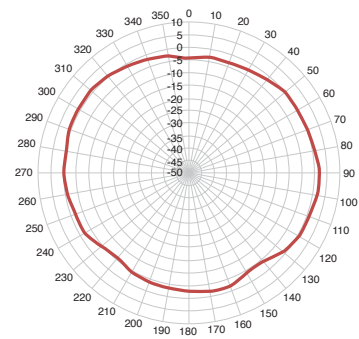
Internal Antenna (MERU-P1633)	2.4 GHz ~ 2.5 GHz	4.9 GHz ~ 5.9 GHz
Average Antenna Gain	3.0 dBi	4.0 dBi
Polarization	Linear	Linear
Azimuth Beam-width	195°	190°
Elevation Beam-width	98°	100°
VSWR	1:2.0	1:2.0



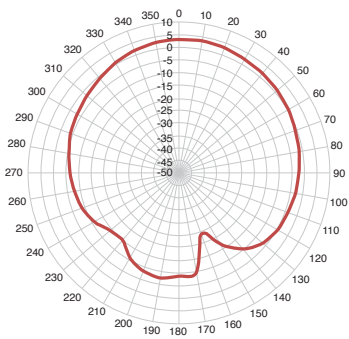
2.4 GHz H-plane



2.4 GHz E-plane



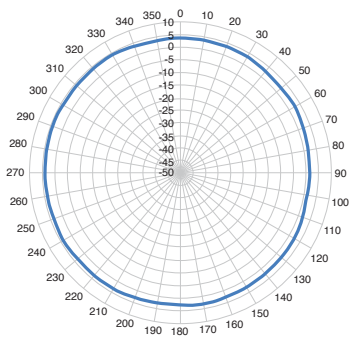
5 GHz H-plane



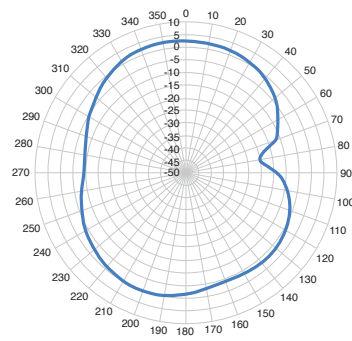
5 GHz E-plane

ANTENNA RADIATION PATTERNS (EXTERNAL ANTENNA MODEL)

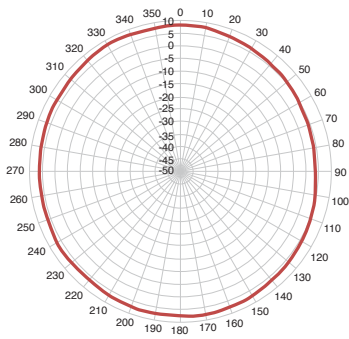
External Antenna	2.4 GHz ~ 2.5 GHz	4.9 GHz ~ 5.9 GHz
Average Antenna Gain	3.3 dBi	6.0 dBi
Polarization	Linear	Linear
Azimuth Beam-width	360°	360°
Elevation Beam-width	75°	55°
VSWR	1:1.5	1:1.5



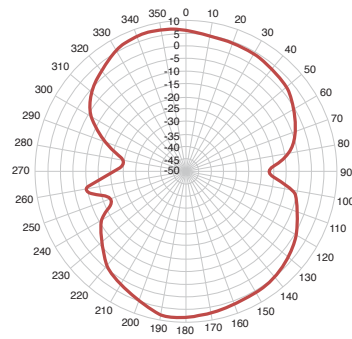
2.4 GHz H-plane



2.4 GHz E-plane



5 GHz H-plane



5 GHz E-plane



GLOBAL HEADQUARTERS
Fortinet Inc.
899 Kifer Road
Sunnyvale, CA 94086
United States
Tel: +1.408.235.7700
www.fortinet.com/sales

EMEA SALES OFFICE
120 rue Albert Caquot
06560, Sophia Antipolis,
France
Tel: +33.4.8987.0510

APAC SALES OFFICE
300 Beach Road 20-01
The Concourse
Singapore 199555
Tel: +65.6513.3730

LATIN AMERICA SALES OFFICE
Prol. Paseo de la Reforma 115 Int. 702
Col. Lomas de Santa Fe,
C.P. 01219
Del. Álvaro Obregón
México D.F.
Tel: 011-52-(55) 5524-8480